



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/703,034	10/31/2000	Joseph R. Zbiciak	TI-30553	8913

23494 7590 03/15/2004

TEXAS INSTRUMENTS INCORPORATED
P O BOX 655474, M/S 3999
DALLAS, TX 75265

EXAMINER

DO, CHAT C

ART UNIT	PAPER NUMBER
----------	--------------

2124

DATE MAILED: 03/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/703,034

Applicant(s)

ZBICIAK, JOSEPH R.

Examiner

Chat C. Do

Art Unit

2124

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,9-11 and 13-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,10-11 and 13-17 is/are rejected.
- 7) ☒ Claim(s) 3-5 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This communication is responsive to Amendment B, filed 2/20/2004.
2. Claims 1, 3-5, 9-11, and 13-17 are pending in this application. Claims 1 and 13 are independent claims. In Amendment B, claims 2, 6-8, and 12 are cancelled. This action is made non-final.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 16-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re claim 16, the limitation "the step of shifting sign extends the intermediate result" lacks an antecedence basis and is unclear. For examination purposes, the examiner disregards this limitation. Claim 17 has the same problem.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 10-11, and 13-14 are rejected under 35 U.S.C. 103(a) as being obvious over Pitsianis et al. (Pub. No. US 2003/0088601 A1) in view of Adelman et al. (U.S. 5,666,300).

Re claim 1, Pitsianis et al. disclose in Figures 6-7 a method of performing a dot product operation (abstract) with rounding and shifting (627) in a microprocessor in response to a single rounding dot product instruction (Figure 1), the method comprising the steps of: fetching a first pair of elements (Rx.H1 and Ry.H1) and a second pair of elements (Rx.H0 and Ry.H0); forming a first product of the first pair of elements (615) and a second product of the second pair of elements (613); combining the first product with the second product (623) to form a combined product (output of 623); rounding the combined product to form an intermediate result (627). Pitsianis et al. disclose a selection portion bits of intermediate word to store into appropriate location (627 and 629), but Pitsianis et al. do not disclose the shifting the intermediate result. However, Adelman et al. disclose in Figure 2 a shifter is placed at the end of operations to shift the operation result to certain amount prior storing the shifted results (54 into 61-62) due to limited bits storage. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention is made to add a shifter as seen in Adelman et al.'s invention into Pitsianis et al.'s invention because it would enable to improve the system performance for storing limited bits in register efficiently.

Re claim 10, Pitsianis et al. disclose in Figures 6-7 further the step of combining comprises subtracting the product of second pair of elements from the product of first pair of elements (623).

Re claim 11, Pitsianis et al. disclose in Figures 6-7 further the step of combining comprises adding the product of second pair of elements to the product of first pair of elements (625 other pairs).

Re claim 13, it is an apparatus claim of claim 1. Thus, claim 13 is also rejected under the same rationale in the rejection of rejected claim 1.

Re claim 14, it is an apparatus claim of claim 3. Thus, claim 14 is also rejected under the same rationale in the rejection of rejected claim 3.

7. Claim 15 is rejected under 35 U.S.C. 103(a) as being obvious over Pitsianis et al. (Pub. No. US 2003/0088601 A1), as applied to claim 1 above, in view of Silberfenig (U.S. 6,243,594).

Re claim 15, Pitsianis et al. do not disclose the above method being a cellular telephone as an integrated keyboard connected to the processor via a keyboard adapter; a display, connected to the processor via a display adapter; radio frequency (RF) circuitry connected to the processor; and an aerial connected to the RF circuitry. However, Silberfenig discloses in Figures 1-2 a cellular telephone as an integrated keyboard connected to the processor via a keyboard adapter; a display, connected to the processor via a display adapter; radio frequency (RF) circuitry connected to the processor; and an aerial connected to the RF circuitry. Therefore, it would have been obvious application to a person having ordinary skill in the art at the time the invention is made to use the above method in the device as disclosed in Silberfenig's invention because it would enable to improve the system of computing the dot products in signal processing (col. 19 lines 35-45).

Allowable Subject Matter

8. Claims 3-5 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claims 16-17 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Amendment

10. The amendment filed 2/20/2004 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

The limitations cited in claims 16-17 introduce new matters into the disclosure; particularly the step of shifting sign extends the intermediate result.

Applicant is required to cancel the new matter in the reply to this Office Action.

Response to Arguments

11. Applicant's arguments with respect to claims 1, 3-5, 9-11, and 13-17 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

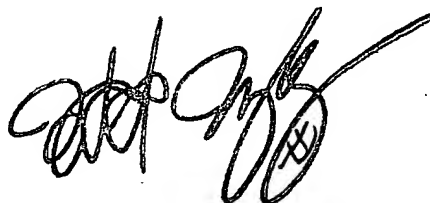
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chat C. Do whose telephone number is (703) 305-5655. The examiner can normally be reached on M => F from 7:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chaki Kakali can be reached on (703) 305-9662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chat C. Do
Examiner
Art Unit 2124

March 5, 2004

A handwritten signature in black ink, appearing to read 'Todd Ingberg', with a long, sweeping horizontal line extending to the right.

Todd Ingberg
Primary Examiner
Group 2100